1952

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Louisiana Bulletin No. 461 January, 1952

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The writer obtained the data at Lake Providence, Oberlin, Marksville, Mansura, and St. James.

YIELD TRIALS WITH CORN HYBRIDS IN LOUISIANA, 1948-51

H. W. Ivy, Jr.

INTRODUCTION

The increased yield of corn per acre during the period 1949-51 as shown in the following table indicates some progress in corn production. Prior to 1949 Louisiana had never averaged as much as 20 bushels of corn per acre. The 1949-51 three-year period average is 23.5 bushels per acre. Undoubtedly, the increased use of hybrids and better fertilization played important roles in the increased average acre yield of corn in Louisiana.

Corn Acreage and Yield 1942-51

Year	Acreage harvested, 1000 acres	Average acre yield, bushels
1942	1,296	17.0
1943	1,270	16.0
1944	1,168	14.0
1945	1,075	19.5
1946	1,000	15.0
1947	960	14.5
1948	922	18.5
1949	802	23.0
1950	866	23.0
1951	762	24.5

Louisiana farmers plant about one-fifth of their harvested cropland in corn. The planting of adapted hybrids, which yield 20 to 30 per cent more than the better open-pollinated varieties, therefore, means millions of extra bushels of corn to the farmers of Louisiana.

The purpose of corn yield trials in Louisiana is to determine the best adapted hybrids. Hybrids have limited areas of adaptation, and very seldom will a hybrid developed under conditions very different from those in the South perform satisfactorily in Louisiana.

Experimental Methods

The corn yield trials are conducted in different sections of the state in order to determine adaptability of the various hybrids to the different soil, climatic, and other environmental conditions.

The usual size of the test plot is two 40- or 42-inch rows 30 to 50 feet long. The tests in Lafourche and St. James parishes had plots consisting of two six-foot rows 50 feet long. At the Experiment Stations the tests have 25 entries or fewer. The tests located on farms usually have 10 entries or fewer. A randomized block

Locations of Corn Tests:

1. Bossier City
2. Homer
3. Calhoun
4. Lake Providence
5. St. Joseph
6. Mansura
7. Moreauville
8. Oberlin
9. Baton Rouge
10. St. James
11. Franklinton

arrangement is used with four or five replications. All tests are hand planted at the rate of three or four seeds per hill and later thinned to one or two stalks per hill as desired in the particular test. Planting and harvesting are under the supervision of a representative of the Agricultural Experiment Station.

The ear height is the approximate number of inches from the ground to the point where the upper ear is attached to the stalk. The plant height is measured to the base of the tassel.

In grading husks a grade of good denotes a husk that extends at least two inches beyond the ear tip and is tight. A fair husk extends from one to three inches beyond the ear tip and is of medium tightness. A poor husk is loose and usually extends less than two inches beyond the ear.

Sound ears are those free of rot and weevil damage at harvest.

In determining the percentage of erect plants, all plants leaning more than 30 degrees and those broken below the ear are counted as lodged plants. The percentage erect is then calculated.

Significant difference is given at the foot of each table. However, it is not given for the period-of-year summaries. It is not possible to determine the yielding ability with absolute accuracy on account of variation in soil fertility and other uncontrolled variables. A significant difference is a difference great enough to have odds of 19 to 1 against its being due to chance variation alone. Entries varying this much actually performed differently in the particular test.

Experimental Results

In selecting a hybrid the performance for a period of years is more important than any one year's results. A hybrid may be outstanding one year, while under other seasonal conditions it may not prove as satisfactory. A farmer should study the test on the station or farm nearest his farm. This should enable him to choose the best adapted hybrids. Tables 1, 2, 3, 4, 5, and 6 give the four-year period averages for hybrids tested at Baton Rouge, St. Joseph, Homer, Calhoun, and Bossier City, and in Lafourche and St. James parishes.

Dixie 11, a white hybrid, is adapted to North Louisiana. It was the highest yielding hybrid for the four-year period 1948-51 at St. Joseph, Homer, Calhoun, and Bossier City. In the test at Lake Providence it was second in yield only to Dixie 18. Dixie 11 lodges considerably under some conditions.

La. 468, a white hybrid, is adapted to North Louisiana. It is very similar to Dixie 11. Three of the four inbred parents of Dixie 11 and La. 468 are the same. One-half of the La. 468 cobs will be white and the other half red.

Funk's G-780W is a white hybrid that has performed well at Calhoun and Bossier City. At St. Joseph and Lake Providence it has not shown yielding ability equal to that of Dixie 11. Funk's G-785W is a white hybrid recently released to replace 780W. Its performance was comparatively good at Lake Providence in 1951.

Coker's Coastal 811 has more resistance to lodging than any other hybrid tested in Louisiana. This hybrid is white and has a semi-flint grain which shows good rice weevil resistance. Coker's Coastal 811 works well for mechanical harvesting.

Dixie 33 is a white hybrid high in yielding ability. It yielded particularly well at St. Joseph in 1951. This hybrid does not have ample husk for most Louisiana conditions unless harvested early.

Dixie 18 has proved to be a very good yellow corn in North and South Louisiana. The husk coverage and quality are excellent as shown by Figure 1. It has more resistance to lodging than any other yellow corn tested in Louisiana. At St. Joseph and Lake Providence its standing ability was equal to that of Coker's Coastal 811. However, it ranked second in erectness as compared to Coker's 811

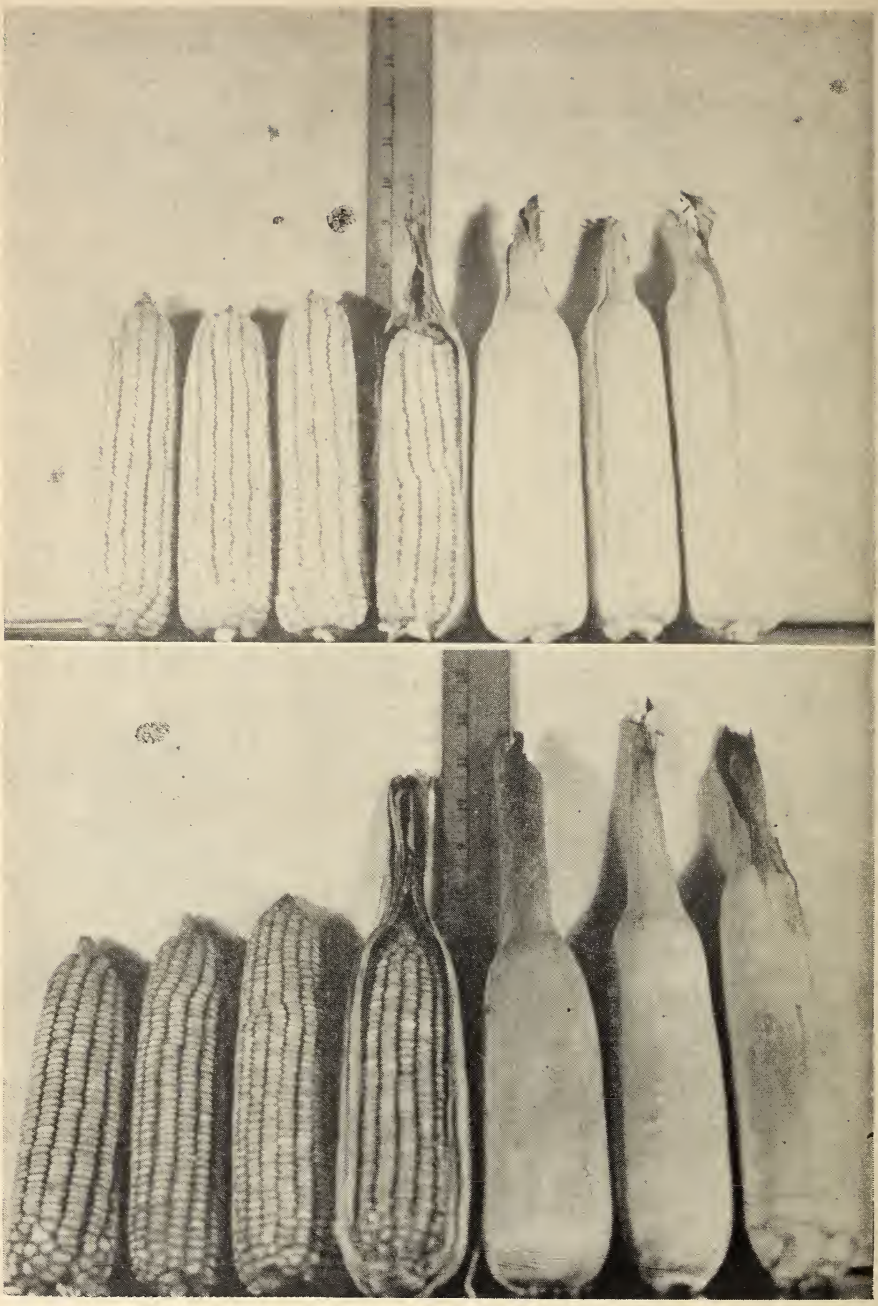

FIG. 1—Above photographs show ear type and husk protection of Dixie 18, bottom, and La. 468, top. The long, tight husk of Dixie 18 is classified as good. The shorter, medium-tight husk of La. 468 is classified as fair.

at Calhoun, Homer, and Bossier City. Dixie 18 grows very tall and has high ears; nevertheless it has been one of the leading hybrids in acre yield of mechanically harvested corn at St. Joseph and Bossier City. Dixie 18 is recommended for silage throughout Louisiana.

N.C. 27 is adapted to North Louisiana but the husk protection is not ample for late harvesting. This corn can best be utilized in Louisiana to hog off or to harvest early. This yellow corn is also one of the hybrids best adapted to mechanical harvesting. This quality was evident in the mechanically harvested tests at St. Joseph and Bossier City.

Dixie 22 performs very similarly to N.C. 27 and has the same area of adaptation. Like N.C. 27 its husk is not ample. Dixie 22 did not show as much weevil resistance at Baton Rouge and Calhoun as did N.C. 27. Some of the Dixie 22 ears are reddish in color.

Funk's G-714A compared favorably with Dixie 18 in yielding ability at Bossier City and Homer. At Calhoun, St. Joseph, and Lake Providence, Dixie 18 outyielded Funk's G-714A. Funk's G-714A also lodges badly as compared to Dixie 18.

La. 521 is adapted to all South Louisiana. It was the highest yielding hybrid in the tests at Mansura, Moreauville, Baton Rouge, St. James, and Oberlin in 1951. La. 521 produces more high quality corn than any other white hybrid tested in South Louisiana.

Funk's G-737 is adapted to South Louisiana. This is a yellow corn of good quality which compares favorably with Dixie 18 in yielding ability in that area. However, Dixie 18 has a higher percentage of erect plants at harvest.

Table 1—Average performance of corn hybrids in test on Olivier silt loam at Louisiana Agricultural Experiment Station, Baton Rouge, 1948-51.

	Averages				
	4-year	3-year		2-year	
Entry	Acre yield, bu.	Acre yield, bu.	Erect plants at harvest, %	Acre yield, bu.	Erect plants at harvest, %
La. 521	76.2	66.7	43	68.8	60
N.C. 27	72.1	63.6	55	66.1	73
La. 468	72.0	60.2	38	69.6	55
Dixie 18	71.3	63.0	67	63.2	82
Dixie 11	70.4	60.2	41	65.0	58
Funk's G-737	65.5	60.6	45	60.3	63
La. 1031	65.0	56.1	40	60.7	57
Hill Yellow Dent	53.5	47.8	53	51.3	68
Calhoun Red Cob	53.5	47.4	35	50.6	45
Jarvis Prolific	53.0	45.9	43	51.7	58
Funk's G-714A	...	58.4	40	63.0	53
Funk's G-780W	...	57.2	44	60.4	54
Coker's Coastal 811	...	..	..	69.7	83
Dixie 33	...	...	..	67.3	72
Dixie 22	..	...	..	66.2	67

Table 2—Average performance of corn hybrids in test on Commerce very fine sandy loam at the Northeast Louisiana Agricultural Experiment Station, St. Joseph, 1948-51.

Entry	Averages				
	4-year	3-year		2-year	
	Acre yield, bu.	Acre yield, bu.	Erect plants at harvest, %	Acre yield, bu.	Erect plants at harvest, %
Dixie 11	110.4	110.9	69	110.8	69
N.C. 27	108.5	110.9	76	112.3	80
La. 468	106.9	109.0	75	110.2	80
Dixie 18	105.8	110.7	87	108.9	88
Wood's V-125	104.3	108.0	82	108.9	83
La. 521	103.5	105.3	61	102.2	59
La. 1031	99.9	104.4	67	103.3	68
Funk's G-737	94.6	98.0	67	96.6	72
Jarvis Prolific	84.6	85.3	65	84.1	61
Hill Yellow Dent	82.9	84.9	76	83.8	75
Calhoun Red Cob	80.9	82.8	59	84.5	67
White Tuxpan	73.5	76.0	63	89.6	63
Funk's G-780W	..	107.2	71	103.2	71
Funk's G-714A	...	100.0	63	103.5	69
Dixie 33	...	...	..	116.8	86
Dixie 22	..	...	..	114.8	73
Coker's Coastal 811	..	..		105.6	86

Table 3—Average performance of corn hybrids in test on Lakeland fine sand at North Louisiana Hill Farm Experiment Station, Homer, 1948-51.

Entry	Averages				
	4-year	3-year		2-year	
	Acre yield, bu.	Acre yield, bu.	Erect plants at harvest, %	Acre yield, bu.	Erect plants at harvest, %
Dixie 11	46.2	51.2	45	54.0	24
La. 468	43.8	51.0	46	53.3	24
N.C. 27	43.4	49.2	54	52.0	31
Jarvis Prolific	35.0	40.7	51	43.0	34
Dixie 18		49.2	56	54.4	35
Funk's G-714A	..	47.6	45	51.3	26
Dixie 22	...	..	..	58.4	34
Coker's Coastal 811	..	..	..	53.8	57

Table 4—Average performance of corn hybrids in test on Orangeburg fine sand at North Louisiana Experiment Station, Calhoun, 1948-51.

Entry	Averages				
	4-year	3-year		2-year	
	Acre yield, bu.	Acre yield, bu.	Erect plants at harvest, %	Acre yield, bu.	Erect plants at harvest, %
Dixie 11	55.0	57.9	43	56.0	41
La. 468	49.2	53.3	57	51.1	53
N.C. 27	49.0	51.7	78	52.0	76
La. 521	49.0	52.5	52	52.0	56
Jarvis Prolific	40.7	43.2	67	42.2	72
Calhoun Red Cob	40.4	43.7	56	43.5	51
Hill Yellow Dent	37.7	37.8	77	37.3	74
Dixie 18	...	53.8	83	55.0	78
Funk's G-780W	...	53.0	72	51.3	72
Funk's G-714A	...	49.9	60	49.0	63
Dixie 22	...	...	..	60.0	61
Dixie 33	...	...	..	53.3	78
Coker's Coastal 811	...	...	..	51.1	96

Table 5—Average performance of corn hybrids in test on Yahola very fine sandy loam at the Louisiana Red River Valley Experiment Station, Bossier City, 1948-51.

Entry	Averages				
	4-year	3-year		2-year	
	Acre yield, bu.	Acre yield, bu.	Erect plants at harvest, %	Acre yield, bu.	Erect plants at harvest, %
Dixie 11	95.8	101.4	45	97.9	61
La. 468	92.6	99.0	53	95.8	72
N.C. 27	87.9	91.4	70	90.5	73
La. 521	83.3	89.6	51	83.9	56
Funk's G-737	82.6	89.3	53	86.6	61
La. 1031	78.7	83.1	43	78.6	48
Jarvis Prolific	74.6	80.7	61	83.1	65
Calhoun Red Cob	72.1	80.7	46	80.7	41
Hill Yellow Dent	67.2	72.0	69	68.8	67
White Tuxpan	63.4	68.0	52	68.4	51
Funk's G-780W		96.5	63	97.9	61
Dixie 18		95.6	72	94.7	74
Funk's G-714A		92.1	42	93.0	58
Dixie 22				103.9	76
Dixie 33				95.8	79

Table 6—Corn hybrid tests, six-foot rows, on Commerce silt loam in Lafourche and St. James parishes, 1948-51.

Entry	1951 acre yield, bu.	1950 acre yield, bu.	1949 acre yield, bu.	1948 acre yield, bu.	1948-51 av. acre yield, bu.	1949-51 av. acre yield, bu.	1950-51 av. acre yield, bu.
La. 521	52.9	86.2	83.3	54.1	69.1	74.1	69.6
Dixie 18	48.3	81.4	74.8			68.2	64.9
Funk's G-737	46.4	78.1	73.7	52.0	62.6	66.1	62.3
La. 1031	42.4	73.7	73.1	47.7	59.2	63.0	58.1
Funk's G-790W		76.3	72.7	54.8			
Funk's G-791W	46.7						
Hill Yellow Dent		63.8	59.1	50.1			
White Tuxpan	48.6		50.8	47.6			
Difference required for significance.	*	2.8	5.1	6.0			

* There was no significant difference between entries in 1951.

The tests in Lafourche and St. James parishes were planted on six-foot rows. The growing seasons in 1948 and 1951 were dry, and in both of these years moisture was the limiting factor. In years of limited moisture it is noted that there is little significant difference in the yields of any of the entries.

Louisiana 521 has been the highest yielding corn three out of four years and has the highest average yield for the two-, three-, and four-year period. Dixie 18 and Funk's G-737 have been the leading yellow hybrids.

It has not been possible to make as much corn on six-foot rows as on 40- or 42-inch rows. If sufficient acreage is planted, the purchasing of additional equipment to produce corn on rows narrower than six feet would be justified.

It is particularly important to get a good stand of corn on six-foot rows, or the use of 80 to 100 pounds of nitrogen and hybrid seed corn is not an economical practice. In order to obtain a high rate of efficiency at least 7,000 stalks per acre are necessary. This requires one stalk every 12 inches on six foot rows.

Table 7—Corn hybrid test on Commerce very fine sandy loam, St. Joseph, 1951.

Entry	Acre yield, bu.	Erect plants at harvest, %	Husk grade	Plant height, in.	Ear height, in.
Dixie 33	128.2	77	Poor	125	72
Dixie 11	119.7	45	Fair	132	70
Dixie 22	117.4	51	Poor	128	71
Wood's V-125	116.5	79	Poor	118	59
La. 468	114.6	71	Fair	127	78
Funk's G-791W	113.5	67	Good	136	78
N.C. 27	112.7	65	Poor	125	69
Wood's V-51	112.1	72	Poor	111	58
Dixie 18	111.9	78	Good	136	81
Funk's G-780W	110.9	53	Fair	128	71
Coker's Coastal 811	110.1	74	Fair	114	64
Ga. 281	109.6	36	Good	143	82
La. 1031	107.3	54	Good	133	85
La. 0015	107.3	41	Good	135	78
Funk's G-714A	106.0	51	Fair	114	69
La. 9017	105.6	78	Good	131	69
La. 9011	104.7	69	Good	127	75
La. 9012	103.7	84	Good	128	79
La. 1220	102.3	73	Good	132	77
Funk's G-721	101.8	62	Poor	117	68
Funk's G-737	100.1	51	Good	132	77
La. 521	99.3	30	Good	136	76
Calhoun Red Cob	92.1	51	Good	136	74
White Tuxpan	91.9	53	Good	145	93
Hill Yellow Dent	91.4	64	Good	141	81
Jarvis Prolific	86.1	41	Fair	121	64

A difference of 7.4 bushels per acre between any two entries is required for significance.

Table 8—Corn hybrid test on Lakeland fine sand, Homer, 1951.

Entry	Acre yield, bu.	Erect plants at harvest %	Husk grade	Plant height, in.	Ear height, in.
Dixie 22	58.6	13	Poor	80	48
La. 9017	56.2	25	Good	85	52
Funk's G-721	54.4	22	Poor	72	38
N.C. 27	53.9	9	Poor	80	48
Funk's G-714A	53.0	8	Fair	80	44
Dixie 11	51.2	9	Fair	82	50
Dixie 18	49.2	20	Good	88	58
La. 468	45.6	8	Fair	80	48
Jarvis Prolific	44.0	18	Fair	78	44
Coker's Coastal 811	43.9	35	Fair	78	36

The entries did not show significant differences in yield.

Table 9—Corn hybrid test on Orangeburg fine sand, Calhoun, 1951.

Entry	Acre yield, bu.	Erect plants at harvest, %	Husk grade	Ear wt., lb.	Sound ears, %	Plant height, in.	Ear height, in.
Dixie 22	60.5	62	Poor	.40	86	80	42
Dixie 11	59.2	36	Fair	.33	92	85	45
Dixie 18	56.8	91	Good	.34	99	88	50
La. 0015	56.2	57	Good	.36	98	80	50
La. 521	55.7	53	Good	.35	97	85	48
Dixie 33	55.6	71	Poor	.38	90	80	44
La. 1031	54.8	37	Good	.33	99	85	48
La. 1220	54.6	54	Good	.40	97	80	50
La. 468	54.2	47	Fair	.35	96	82	46
La. 9011	53.7	79	Good	.36	97	80	44
Coker's Coastal 811	52.4	97	Fair	.34	98	75	36
N.C. 27	51.9	76	Poor	.36	92	78	42
Funk's G-780W	51.3	61	Fair	.35	93	85	46
La. 9017	51.1	77	Good	.38	96	80	50
La. 9012	51.0	77	Good	.35	97	84	54
Funk's G-721	47.6	55	Poor	.40	85	78	38
Funk's G-714A	46.8	50	Fair	.29	95	78	38
Wood's V-125	45.3	84	Poor	.46	40	80	36
Wood's V-51	45.2	82	Poor	.45	47	75	30
Calhoun Red Cob	44.4	44	Good	.45	92	100	63
Jarvis Prolific	43.3	64	Fair	.33	90	78	36
Hill Yellow Dent	39.5	71	Good	.40	95	85	54
Tennessee Jarvis	35.9	74	Fair	.38	85	72	30

A difference of 8.0 bushels per acre between any two entries is required for significance.

Table 10—Corn hybrid test on Yahola very fine sandy loam, Bossier City, 1951.

Entry	Acre yield, bu.	Erect plants at harvest, %	Husk grade	Plant height, in.	Ear height, in.
Dixie 22	107.7	63	Poor	94	53
Dixie 11	98.4	54	Fair	100	56
Funk's G-791W	97.4	54	Good	108	60
Funk's G-780W	97.2	56	Fair	102	58
Funk's G-714A	96.9	36	Fair	90	50
La. 9011	95.2	56	Good	106	56
Dixie 18	94.6	59	Good	108	60
La. 468	94.1	60	Fair	90	57
La. 9017	91.4	69	Good	100	58
Funk's G-721	90.7	41	Poor	85	44
Dixie 33	90.5	73	Poor	110	60
N.C. 27	89.7	62	Poor	105	54
Coker's Coastal 811	89.7	89	Fair	102	48
La. 0015	85.7	49	Good	93	58
La. 521	85.1	38	Good	112	60
La. 9012	82.4	65	Good	98	58
La. 1220	81.5	58	Good	100	53
Ga. 281	77.8	39	Good	112	62
Jarvis Prolific	77.6	46	Fair	100	40
La. 1031	75.4	37	Good	110	72
Funk's G-737	75.2	44	Good	100	60
White Tuxpan	74.9	37	Good	120	80
Calhoun Red Cob	66.9	22	Good	106	65
Hill Yellow Dent	55.6	50	Good	104	64

A difference of 11.6 bushels per acre between any two entries is required for significance.

Table 11—Corn hybrid tests on Commerce very fine sandy loam, Lake Providence, 1950-51.

Entry	1950 acre yield, bu.	1951 acre yield, bu.	1950-51 av. acre yield, bu.	*Erect plants at harvest, %
Dixie 18	101.0	102.3	101.7	83
Dixie 11	97.4	102.0	99.7	71
La. 468	93.4	101.9	97.7	64
Funk's G-785W		99.8		
Coker's Coastal 811	92.6	98.3	95.5	85
N.C. 27		93.3		
Funk's G-714A		91.2		
Funk's G-737		86.2		
Dixie 22	94.0			76
Kentucky 405B	87.8			78
Funk's G-714	87.0			58
Hasting's Yellow Prolific	84.2			54
Funk's G-780W	82.4			60
White Tuxpan	79.4			67
Mosby	78.5			68
Jarvis Prolific	78.1			60
Texas 12	73.6			49
Kentucky 203	67.8			76
Broadbent 205W	67.3			69
Funk's G-50	57.1			82
Difference required for significance	5.5	7.2		

* Erectness data are from the 1950 test only.

Table 12—Corn hybrid test on Olivier silt loam, Baton Rouge, 1951.

Entry	Acre yield, bu.	Erect plants, %	Husk grade	Ear weight, lb.	Sound ears, %
La. 521	52.6	38	Good	.29	90
Coker's Coastal 811	52.4	69	Fair	.28	90
Dixie 22	52.3	47	Poor	.36	45
Dixie 11	52.3	35	Fair	.29	71
La. 468	51.9	37	Fair	.29	80
Funk's G-721	50.2	24	Poor	.34	71
Funk's G-714A	47.9	18	Fair	.29	53
Dixie 33	47.6	57	Poor	.34	44
La. 9011	47.3	62	Good	.31	76
White Tuxpan	46.2	13	Good	.38	83
Funk's G-791W	45.9	32	Good	.30	83
N.C. 27	43.9	57	Poor	.31	70
Funk's G-737	43.5	37	Good	.28	85
Dixie 18	43.2	67	Good	.29	89
Funk's G-780W	42.7	27	Fair	.26	62
La. 0015	41.6	66	Good	.29	94
La. 1220	41.2	67	Good	.32	78
La. 9017	39.5	75	Good	.27	84
Ga. 281	38.9	56	Good	.23	96
Calhoun Red Cob	38.1	20	Good	.33	86
La. 1031	37.1	34	Good	.22	91
Jarvis Prolific	36.5	38	Fair	.27	73
La. 9012	32.9	79	Good	.25	90
Hill Yellow Dent	32.3	47	Good	.29	86

A difference of 16.0 bushels per acre between any two entries is required for significance.

Table 13—Corn hybrid test on Bowie very fine sandy loam, Franklinton, 1951.

Entry	Acre yield, bu.	Entry	Acre yield, bu.
La. 9012	55.9	Ga. 281	50.0
Funk's G-791W	55.2	La. 9011	49.8
Coker's Coastal 811	54.7	La. 9017	48.6
Dixie 11	54.4	La. 468	48.3
La. 521	54.0	Dixie 18	46.3
Funk's G-737	52.0	Jarvis Prolific	45.0
La. 1220	51.6	White Tuxpan	43.7
La. 0015	50.8	Hill Yellow Dent	39.0
La. 1031	50.5	Calhoun Red Cob	36.1

Table 14—Corn hybrid tests on Yahola very fine sandy loam, Moreauville, 1950-51.

Entry	1951 acre yield, bu.	1950 acre yield, bu.	1950-51 av. acre yield, bu.
La. 521	74.5	105.2	89.9
Dixie 18	70.0	105.3	87.7
Funk's G-791W	67.4	91.7*	
Funk's G-737	64.3	92.3	78.3
La. 1031	62.0	79.0	70.5
White Tuxpan	48.8	74.9	61.9
Dixie 11	44.1		
Difference required for significance	14.3	10.8	

*Funk's G-790W.

Table 15—Corn hybrid tests on Beauregard very fine sandy loam, Oberlin, 1950-51.

Entry	1951 acre yield, bu.	1950 acre yield, bu.	1950-51 av. acre yield, bu.
La. 521	57.9	88.1	73.0
Dixie 11	58.9	86.1	72.5
Dixie 18	53.1	81.5	67.3
La. 1031	51.2	70.8	61.0
Funk's G-791W	47.8	71.2*	
Funk's G-714A	47.4	70.4	59.4
Funk's G-737	44.7	66.7	55.7
Killgore Prolific	33.3	48.4	40.8
Difference required for significance	5.2	8.2	

*Funk's G-790W.

Table 16—Corn hybrid tests on Olivier silt loam, Mansura, 1951.

Entry	Acre yield, bu.	Erect plants at harvest, %	Husk grade
La. 521	70.0	68	Good
Dixie 11	55.1	64	Fair
Funk's G-791W	54.5	67	Good
Funk's G-737	54.0	70	Good
Dixie 18	54.0	75	Good
Calhoun Red Cob	27.3	22	Good

A difference of 5.4 bushels per acre between any two entries is required for significance.

Adaptability of Various Corn Hybrids to Mechanical Harvesting

Tests in 1951 were subject to winds of high velocity just prior to harvest that caused severe lodging. Tables 17 and 18 clearly show that harvesting by mechanical means under these conditions leaves considerable corn in the field. For most years it will prove profitable to glean mechanically harvested fields with cattle or hogs. (A steer should be at least two years old to cow-down corn.) Electric fencing has proved to be especially adaptable for this purpose.

A moisture content of about 20 per cent has been found most desirable for mechanical harvesting when a drier is not available. R. Y. Ratcliff at St. Joseph lists the following reasons for harvesting corn with 20 per cent moisture in the grain: (1) If the corn is going to stand up, it will be standing at or above this moisture content; (2) the stalks are green enough not to snap off —they pull through the machine; (3) corn at 20 per cent moisture does not shell while being harvested as badly as drier corn; (4) equipment damage is less and harvesting faster, for there is less clogging and choking up of the picker.

J. Y. Oakes and L. L. McCormick at Bossier City presented data, Table 17, that show a close relationship between per cent erect plants and the per cent corn recovered mechanically.

Coker's Coastal 811, a white corn, had the largest number of bushels per acre harvested mechanically in each test, whereas NC 27 and Dixie 18 were the leading yellow hybrids.

There are only one year's data available giving results of mechanically harvested tests. These hybrids all mature at practically the same time. The differences in moisture content were not considered in computing yields; however, the moisture contents were apparently very similar.

Table 17—Corn hybrid test on Yahola very fine sandy loam harvested with a mechanical picker, Bossier City, 1951.

Entry	Acre yield, bu.	Acre yield harvested mechanically, bu.	Yield harvested mechanically, %	Erect plants, %	Ear height, in.
Dixie 11	90.1	55.9	62	43	55
La. 521	80.5	53.5	67	62	61
La. 468	79.7	57.1	72	55	55
Dixie 18	79.3	62.2	78	73	63
N.C. 27	79.0	65.8	83	79	55
Funk's G-721	76.2	60.3	79	64	46
Funk's G-714A	73.0	49.6	68	60	50
Coker's Coastal 811	72.4	66.3	92	90	49
Jarvis Prolific	56.7	39.9	70	64	42

Table 18—Corn hybrid test on Commerce very fine sandy loam harvested with a mechanical picker, St. Joseph, 1951.

Entry	Acre yield, bu.	Acre yield harvested mechanically, bu.	Yield harvested mechanically, %
La. 468	108.2	78.5	73
N.C. 27	106.3	67.5	64
Coker's Coastal 811	103.2	85.7	83
Dixie 18	99.1	67.3	68
Funk's G-737	96.6	44.8	46
Funk's G-714A	96.0	41.3	43
Jarvis Prolific	86.0	57.8	67

HYBRID RECOMMENDATIONS, 1951

North Louisiana:

Dixie 11 (white)
La. 468 (white)
Funk's G-780W (white)
Coker's Coastal 811 (white)
Dixie 18 (yellow)
*N.C. 27 (yellow)
*Dixie 22 (yellow)
Funk's G-714A (yellow)

South Louisiana:

La. 521 (white)
Dixie 18 (yellow)
Funk's G-737 (yellow)

Dixie 18 is recommended for silage throughout the state.

*These hybrids have good yielding ability but they should be harvested early, as their husk protection is not ample.